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THE WOMEN'S INDUSTRIAL NEWS

ORGAN OF THE WOMEN'S INDUSTRIAL COUNCIL (Incorporated),
6 YORK BUILDINGS, ADELPHI, STRAND, LONDON, W.C.2.

Vol. XXI. NEW SERIES. No. 81—JULY, 1918.

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VOL. XXI.—NEW SERIES. *No.* 81.—*JULY*, 1918.

NOTICE.

In consequence of the increased cost of paper and printing, the Editor finds it necessary either to increase the price of the "News," or to reduce the output. In view of the shortage of paper throughout the country it has been decided, with great reluctance, to take the second course, and to omit altogether the October number. The next issue of the "News" will therefore be in January, 1919.

COUNCIL NOTES.

THE Executive Committee is maturing a Scheme for the institution of a Women's Research Department. It is felt that, in view of the recent development of women's influence in public affairs, there is urgent need of a centre where accurate and up-to-date information can be obtained on all matters affecting women's economic position.

The Department will, if the scheme materialises, be based upon the present Investigation Committee, which will be enlarged by the co-option of members, some from outside the Council, and will have extended powers and a certain degree of autonomy.

The results of the Department's work are intended for the use and benefit of the Women's Movement in all its phases, and in order that it shall fulfil the needs of the moment the co-operation of all the women's societies and other societies concerned with women is an essential feature of the Scheme This co-operation can be obtained in either of two ways, by (*a*) affiliation, or (*b*) subscription. Those who affiliate to the Department will be asked to nominate a representative to serve on the Committee, they can ask for special investigations, and will be asked to help the Department to obtain information should it be in their power to do so.

The Bibliography, compiled for the Council by Miss Wyatt Papworth and Miss D. M. Zimmern in 1913, has been kept up to date, and will be continued for the use of the Department.

This Scheme will necessarily entail a good deal of additional expense, which the affiliating societies are being asked to share.

The National Union of Women's Suffrage Societies has already provisionally argeed to the terms of affiliation, and it is hoped that others also will see the immense gain to the Women's Movement in a scheme of co-operation which will not only pool the funds, and so ensure much better results than isolated efforts, but, even more important, will pool the fruits of the investigations, and render the information available to all.

It is intended also to make the Department available to individuals as subscribers, as it is thought that a supply of accurate and reliable information will be of great service to speakers and writers on women's subjects, as well as to members and candidates for Parliament.

It is hoped to secure the services of Miss B. L. Hutchins as Chairman and Mrs. Barton (Miss D. M. Zimmern) as Hon. Secretary to the Department.

Household Orderly Corps

The Household Orderly Corps Committee have now matured the detailed scheme for the working of the centres, and are ready to put it into operation immediately, in any district where sufficient support, both moral and financial, can be obtained. It is hoped that some people will come forward prepared to guarantee the initial cost and the first few months' working expenses. The centres will all be financially self-supporting, but a guarantee fund must be raised which will ensure that the standing charges, wages, &c., can be met until the scheme is fully established.

A Drawing-Room Meeting was held in Kensington, by kind invitation of Mrs. George Booth, on July 1st, and twenty members of an audience of about forty put down their names as willing to join the Guild of Employers should a centre be started in that district. The Committee will be glad to hear of other readers of *The News* living in Kensington or the neighbourhood who would like to help in establishing a centre in that district.

REPORT ON THE INDUSTRY AND MOTHERHOOD ENQUIRY.

PART III.

QUALITY OF MATERNITY IN RELATION TO INDUSTRIAL OCCUPATION.

This, the third part of the enquiry into the effect of different types of industry upon Motherhood, is an endeavour to cast the net over a wider area than in the other two parts. The area, however, has not been so wide as at first hoped, because, from a variety of

reasons, it has been necessary to confine its scope to London, thus leaving out all that valuable field of information of the great Northern industrial centres. The information here dealt with has been obtained entirely through voluntary work and voluntary workers with skill, knowledge, ability, and enthusiasm are becoming daily rarer. Our thanks are due to those who have worked with such untiring zeal and skill in collecting the data upon which the enquiry is based ; their work has included the drudgery of copying particulars from case papers, as well as the more interesting work of interviewing experts.

Scope of the Enquiry.

The intention of the Council was to take as many cases of mothers as possible and to tabulate all the available particulars bearing upon the problem. In order to do this it was decided to go to the fountain head and to take our information from the cases of those mothers, who by one authority or another, were being dealt with on account of their maternity. Thus we selected for our field of enquiry Schools for Mothers, Infant Welfare Centres, and maternity wards of hospitals. The details we set ourselves to seek were as follows :—

Centre or hospital.
Case number.

Mother's age.
„ health.
„ occupation—Adolescence.
Before marriage.
During pregnancy.
How long ceased before confinement.
Former pregnancies.
Children living.
„ dead.
„ „ causes.
Still-births or miscarriages.
Health of infant.
Whether nursed by mother.
Nature of confinement.

Father's age.
„ health.

Standard of living and home conditions.

It soon became evident that our thirst for information would for the most part have to be unassuaged. One or two of the best equipped and staffed Infant Welfare Centres were recording a good deal of this information, but in all but one centre " Nature of confinement " was omitted, as well as adolescent and pre-marriage

employment. The Maternity Wards, on the other hand, had, of course, the fullest information about the confinement, but some omitted all reference to the health of the older children. The Westminster Health Society alone fulfilled the greater part of our requirements, and the records kept there, besides being placed at our disposal in the most generous and helpful way, are, for our purposes and probably any other, about as perfect and complete as human nature could make them.

To enumerate or acknowledge adequately all the help and co-operation we have received would take up too much space. With two exceptions—general hospitals in both cases—every facility we could desire was readily accorded to us, and almoners, doctors, matrons, even clerks, helped us in every way. In one case (the City Road Lying-in Hospital), where no records had been kept of the details we required, the Matron and one of the Sisters collected, from 90 cases, as many facts as possible on purpose for us. One other Hospital—Middlesex—offered to do the same, but the offer came unfortunately too late, and we could not avail ourselves of it.

We collected in all 934 cases, but owing to the unequal distribution of the information the whole number cannot be included in any of the statistics. This small number of cases cannot, it is evident, give sufficient data upon which to base definite conclusions or reliable statistics. One medical expert (Dr. Chadburn) estimated that at least 1,000,000 cases would be required to yield statistics of real value. The Council is, of course, aware of the danger of deducing conclusions from insufficient data, and the report is not put forward with that intention. It is given rather as an indication of the way in which the subject could be dealt with and as the result of a real and unbiassed effort to find whether any indications could be traced that would be of value in any larger enquiry. It is a pioneer effort, and as such has produced some rather unexpected results.

The first fact which emerges very clearly, perhaps the most clearly of all, is that practically no real data exist. If this country really wanted to improve the health and well-being of its citizens, the first step should be to acquire accurate knowledge of those things which act adversely upon the health of infants. And the first factor is that which begins to operate before birth, even before conception, through the mother's health. One can even go further and say the effect on infant mortality of the adolescent life of the mother is not one of the least important factors. Yet no records seem to exist which enable an enquiry to take count of such factors. It is not possible to trace the histories of the mothers' employment from adolescence to maternity, with all the attendant details, because no such records are kept anywhere. It would, however, be perfectly possible to begin to collect these, and if such an enquiry is ever

taken up on a large enough scale to be of real statistical value, preparation for the collection of data will have to be made several years previously.

In attacking this problem it is necessary to determine what exactly one is out to seek.

The effects of industry on maternity fall under two heads, viz.: the effect on the child, as shown by the rate of infant mortality, sickness, still-births, &c., and the effect on the mother, as shown by difficult or dangerous confinements, inability to suckle, and impaired power of recovery from child-birth. One must also keep clearly in mind the difference between the industry which was followed during adolescence, before pregnancy, or during pregnancy. It is probable that there are occupations which, while perfectly suitable for a woman when in normal health, are unsuitable while she is pregnant.

An endeavour has been made to classify the industries under physical actions, *i.e.*, sitting continuously, standing, lifting heavy weights, jolting, treadling, reaching upwards, &c. But here we were under the serious disadvantage of not being able to ascertain the exact employment. "Laundry work" is a general term implying one of several kinds of physical action. "Machining" may be either treadle or power, the action being quite different in each case, although sitting is a necessary concomitant of both. "Munition work" is a vague term which may imply, according to the working-woman's phraseology, anything from gas-masks to T.N.T. Again, domestic service and office cleaning, which figure largely in the industrial work of London women, differ not at all from that of housewife, yet one class comes under the heading "industrially occupied" and the other of "not industrially occupied." With regard to the possible effect of the mother's industry upon the health of the children, it is very difficult to apply such a test by means of infant mortality statistics. According to Dr. Brend ('The Health of the Nation,' chap. iii. p. 86): "The infant death-rate in the first week of life is almost constant under all circumstances....we are led irresistibly to the conclusion that these differences [infant mortality rates as between favourably and unfavourably situated classes] are almost entirely due to the action of *post-natal* environment and not to the influence of *pre-natal* conditions." Whether this deduction be right or wrong, there is no doubt that the tangle of causes which results in a high rate of infant mortality is so difficult to unravel that one cannot connect it too closely with any pre-natal causes. The majority of infants appear to be born healthy, whether their mothers go out charing or munition-making up to the eighth month of pregnancy or are surrounded with every comfort and medical care that money can procure. It may well be asked, why, then, submit your cases to such a test? For answer we say that in this enquiry we set forth with unbiassed mind to see what results we could obtain. Those results we present herewith.

Expert Evidence.

No investigation of this sort could be properly undertaken without including the opinions of those best able to estimate the practical effects of conditions of life on the matter of infant mortality, child-birth labour, and the health of the mothers.

For this purpose we have interviewed many doctors, both those in general practice and those who attend the Lying-in Hospitals, Matrons of hospitals, Midwives, Health Visitors, and Superintendents of Infant Welfare Centres. We prepared an elaborate and detailed questionnaire for the doctors, which included the following headings :—

1. The effect on child-birth labour of different types of industry followed (*a*) before pregnancy, and (*b*) during pregnancy.

2. The effect on the mother's health after confinement.

3. The effect on the health of the child.

4. The effect of insufficient food, bad working conditions, and long hours on the health of the mother, kind of confinement, and the health of the child.

5. What types of bodily exercise were beneficial or harmful to pregnant women.

6. Other causes likely to produce abortion, difficult labour, unhealthy children, &c.

It was found extremely difficult to induce doctors to commit themselves on some of these points. Dr. Darwell Smith (City Road Hospital), while commending the questionnaire as including the most vital points necessary to the enquiry, stated frankly that no one person could possibly answer them and there were some that could not be answered by any one. This was proved to be the case, some of the questions remaining unanswered, and in no case were all dealt with.

It is not possible in the space at command to give each reply in detail, but a fairly complete summary is given below :—

1. Continuous sitting before or during pregnancy is almost universally admitted to have a bad effect on labour, on the mother's health after confinement, and on the health of the child. The contrary opinion was given only by one woman general practitioner, who held that sitting widens the pelvis and renders child-bearing more easy.

2. Standing continuously was held to be less bad, under all the above headings, with the single exception that it tends to induce varicose veins. One doctor mentions, however, that this effect only injures the health of the mother, apart from child-bearing, and does not affect the health of the child nor the character of confinement.

3. Lifting, stretching, and reaching up are all injurious during pregnancy and when carried to excess by young women may cause sterility. This is, however, only when undue strain is caused and internal organs are displaced.

4. Jolting is bad for pregnant women only, and three doctors referred to the unsuitability of tram and bus conducting for women when pregnant.

5. Treadling in general was not objected to by any of the doctors, but two say that treadling with one foot only during immaturity has a serious effect on labour in later years. During pregnancy it might result in miscarriage.

6. Working in a bad atmosphere is only injurious in that it is bad for the general health and in that way affects the life and health of the unborn child.

7. The effect on labour, on the mother's health, and on that of the child of poor and insufficient food, insufficient clothing, and long hours of fatiguing work, were all agreed to be bad, with the exception of clothing, which all declared to be of minor importance. Dr. Adamson of Leeds is of opinion that over work and nerve strain tend to impair the power to suckle and that this condition is increasing very much in recent years. Half the patients leaving the Lying-in Hospitals in her district are unable to suckle their children, and she finds the same condition prevailing among her well-to-do patients.

The greatest stress was laid upon the importance of a sufficiency of nourishing food for the mother. Dr. Emily Macredy says the want of it is a frequent cause of infant mortality, while Dr. Ethel Bentham says she has preached for twenty-five years the importance of good food, as it will enable a woman " to go through almost anything." The tragic part of the matter is, however, as more than one doctor remarks, that the mother is always the first in the family to " go short," thus injuring both herself and her children. One mid-wife calls our attention to the fact that, in cases of under-nourishment the unborn child rarely suffers as it is nourished at the expense of the mother. It is liable to suffer later, however, through lack of its natural food. Dr. Foley of Liverpol, however, holds that the only way in which insufficient nourishment can have any but an adverse effect is that it may render labour easier because the infant will be small and thin !

8. The types of bodily exercise beneficial to pregnant women are not specified by any one ; all agree, however, that exercise, and within reasonable limits even hard work, is not only beneficial but necessary to the health of pregnant women.

It is a well-known custom in the North of England for the expectant mother to begin scrubbing her bedroom floor as soon as labour starts, she then sends for the midwife, and prepares herself for her ordeal.

Several types of exercise are named as being bad for pregnant women, such as lifting heavy weights, reaching and straining upward, and stooping. There are some forms of munition work which entail jumping, and this, says Dr. Adamson, is sometimes sought by pregnant women who wish to induce abortion. It is noted by several doctors and one midwife that custom plays a very important part in deciding whether a pregnant woman can or cannot undertake any physically laborious work. If it is work to which her muscles have become accustomed, it would not be attended by any bad results, but if it is new to her and brings into play muscles she is not in the habit of exercising, it should be undertaken wtih great caution.

9. Other causes likely to produce still-births, sickly children, bad confinements, &c., are cited in order of importance, as syphilis, malnutrition, tuberculosis, and alcoholism. Dr. Scharlieb is of opinion that drink causes still-births and miscarriages chiefly because it leads to accidents, and is not at all sure that in itself it causes injury to the child if the pregnancy pursues its normal course.

In all the interviews we have had with Doctors, Health Visitors, and Infant Welfare Superintendents there has been an extraordinary unanimity of opinion that the nature of the work done does not, with the few exceptions quoted above, cause any bad effect either on the mother or the child. The thing that does matter enormously is the conditions of employment, in fact, anything that is bad for the health of men or women has a bad effect on the children born of them. Only in this sense would they allow that any kind of work is injurious to women as mothers.

Several of the experts consulted laid great stress on the importance of the mental or psychical state of the expectant mother, and for this reason they held the opinion that it is a case for individual temperaments to decide. One woman will fidget and worry herself and, consequently, her unborn child, by constant anxiety about money—or the lack of it—knowing that her budget must be calculated out to the last penny, she knows no ease of mind for fear of an extra call upon her purse. For such women as these—and among working women they are all too common—the relief of adding to the family income by going out to work is so great that the effect cannot but be good. In other cases, where the employment happens to be such that it causes worry and anxiety, nervousness or boredom, it is better to give it up and stay at home. Anything which causes a state of

mental strain or irritation is bound to react adversely upon the child. For this reason they were unanimous in stating that the advantages in better food, lessening of financial worry, and change of environment resulting from industrial employment outside the home—if carried on under healthy conditions—far outweighed any disadvantages, in the majority of cases.

We were able to obtain very little information on the effects of adolescent work, but those opinions that we did obtain were of the most positive and emphatic character. Two of the Leeds doctors, Dr. Adamson and Dr. Sharpe, express the opinion that long hours and heavy work at an early age stunt both boys and girls, and they in their turn will be liable to have small, stunted children. Dr. Bentham thinks that the long hours that growing girls are allowed to work, the overstrain during adolescence, and even more the scanty and hurried meals which are all they can obtain, have a far-reaching effect on subsequent maternity.

Hospitals.

One of our investigators sums up the result of her interviews with the matrons of six of the principal hospitals as follows: Work during pregnancy is not harmful, except lifting and reaching up during the later months. Women are the better for being in work up to the last month, and one matron even went so far as to say up to the very last.

Infant Welfare Centres.

We found it extremely difficult to keep the Mother-Craft and Welfare Centres to the point. Their concern is chiefly with the new-born infant and they persisted in regarding our enquiry as one concerned with the question of whether mothers should go out to work and leave their babies. It was pointed out to them that, as far as our enquiry went, that was not the point. The effect on the children would be just the same whether the mother went to work, or to the "Pictures," or to stand in a queue, with the sole exception that in the former case she would bring her wages home.

We met with the kindest reception from most of the Welfare Centres, and all the Superintendents and Health Visitors, after having been brought back to the point, agreed that the additional wages were of more importance than the drawbacks of the mother's absence at work.

This was also the opinion given by Medical Officers of Health and Health Visitors. All were agreed that worrying about ways and means, trying to make an inadequate income fit the family appetites, seeing the children go short of food and clothing, had a far worse effect upon maternity than any that industrial employment was likely to cause.

PERCENTAGES OF LIVING AND DEAD CHILDREN.

	Women industrially occupied during pregnancy.		Women not industrially occupied.	
	No.	per cent.	No.	per cent.
Number of women	331	100	572	100
Living children	901	2.72	1,675	2.93
Dead children	209	0.63	446	0.78
Still-births	66	0.19	156	0.27

The figures in the above table show a marked similarity, although the numbers in each case are slightly higher for non-industrially occupied mothers. With regard to the still-births and miscarriage figures warning is necessary that it is not safe to place too much reliance on them. The industrially occupied women would be the most likely to conceal the fact of miscarriage. Both Doctors and Infant Welfare Supervisors have called our attention to the fact that these events are frequently either forgotten or concealed, and sometimes three interviews will reveal three different statements of former pregnancies.

With regard to the numbers of children living and dead, the computation was made chiefly to see whether any difference was to be found between the two classes of mothers and, as will be seen, there is practically none.

This indicates nothing either way, and we have no information in most of the cases whether the mother has been "industrially occupied" during the whole of her married life, and, consequently during the time when the former children died, or whether her work is of more recent date.

It is interesting to compare these figures with those Miss Black obtained from the laundry-workers of Acton (Part II.). The average of surviving children there was 3.85 for the mothers in industrial occupations and of those not so occupied 3.66, figures which are higher in both classes than those we have obtained. The average of deaths, viz., 2 per family, is much higher also.

PERCENTAGE OF FAMILIES WHERE ONE-FOURTH OR MORE CHILDREN HAVE DIED.

	Women industrially occupied during pregnancy.		Women not industrially occupied.	
	No.	per cent.	No.	per. cent.
Number of women.. ..	331	100	572	100
Women who have lost 25 per cent of children or over	48	14.5	84	14.7

Here we have selected those families where one-fourth or more of the children born have died and the figures in the two groups are again almost identical. An analysis of the occupations followed by the mothers during pregnancy is of some interest. There were 39 employed in active occupations (office cleaning, bottling, French

polishing, laundry, and various kinds of factory work); 2 were standing continuously (shop assistants) and 5 sitting continuously at needlework; and 2 of them took in a little washing at home, and who should not perhaps be included in those "industrially occupied." None of those in active work would seem to have been engaged in lifting heavy weights or doing any laborious work, with the exception of one woman who worked in a brewery; she had lost four children, before whose births she had always worked, and complained of the heavy weights she had been obliged to life; before the birth of the fifth child she gave up her work while pregnant, with the result that the child lived, though said to be "not very strong, subject to diarrhœa and bronchitis." The case paper also states that the husband is very delicate and suffers from paralysis of the throat, which may or may not have had some connection with the health of the children. Only two other cases offer any connection between the mother's industry and the deaths of previous children; one is that of a woman who, before marriage, did fur work and used quicksilver and acid. This woman had lost 5 children and had 2 miscarriages, the latest born being the only survivor. The other case was that of a woman who had lost 8 children under one week, all of them prematurely born; she was a capsuler and used capsules coloured with some kind of lead colouring, a practice which has recently been discontinued. She attributed the deaths of the first 8 children to the lead paint, probably quite correctly. Unfortunately, the case paper does not state whether the 2 living children were born after the substitution of another kind of capsule, merely that the lead colouring is not now used.

Infants born not Healthy.

	Women industrially occupied during pregnancy.		Women not industrially occupied.	
	No.	per cent.	No.	per cent.
Number of women.. ..	253	100	338	100.
Number of women whose children were not born healthy	41	16.2	55	16.29

We had no information regarding the health at birth of the children of 78 of the 331 women industrially occupied (thus reducing the number to 253), nor of that of 234 of the 572 women not industrially occupied, thus leaving 338 cases only from which to obtain the figures.

Whatever may be the opinions held about the relative importance of pre-natal and post-natal influences upon infant mortality, there will be no disagreement with regard to the health of the child at birth. That must be entirely determined by pre-natal conditions. We have, for this estimate, selected as "good" all the infants whose health is described as "normal," "healthy," "good," &c. The "bad," including "fair," "rather sickly," and "weakly," as well as the premature and still-births and those children born with specific ailments.

Among the women industrially occupied there were 5 cases of still-births, one was of twins (giving a total of 6 still-born children), and 2 were premature births. In both of the latter the mothers were working until the last (presumably because the confinement was not expected) and both were treadle machinists.

Of these 41 cases 10 are also included among the " bad confinements " ; 4 of the women worked at " munitions " until 3, 4, and 5 months before confinement respectively ; 16 were engaged in domestic occupations, charing, cleaning, domestic service, &c., which is much the same work as they would have done had they remained at home ; 8 were in sewing trades ; 5 in breweries ; 4 in factories ; 2 in laundries ; 1 as a clerk ; and 1 as a " barrow runner "—whatever that occupation may be it must clearly be included in the " active " group.

Particulars of pre-marriage employment of the women not industrially occupied during pregnancy were obtained in only 14 cases : 5 did some sort of domestic work, 3 were in sewing trades, and 1 cigarette maker, giving a total of 4 for sitting occupations, 3 were shop assistants, and 1 was formerly a ballet-dancer !

BAD CONFINEMENTS.

	Women industrially occupied during pregnancy.		Women not industrially occupied.	
	No.	per cent.	No.	per cent.
Number of women.. ..	265	100 ..	470	100
Number of bad confinements	28	10.55 ..	52	11.06

The two ways in which it was thought that the effects of industry on maternity could be tested were : (1) the effect on the child or children ; and (2) the effect on the woman herself in relation to her maternity. Even if the children were as healthy and as long-lived as those of women not industrially occupied, the mother herself might suffer through her work by enduring more difficult or dangerous confinements.

In cases where we were so fortunate as to obtain statements on the nature of confinement both from the mother herself and from the hospital it was sometimes found that the two statements did not entirely agree. We have invariably adopted the verdict of the hospitals in these cases. Only experts can say whether or no a case is complicated, and the unfortunate women who have endured " slow and tedious " labours are not unnaturally inclined to call them " bad," while the hospital authorities quite correctly name them " normal." The diversity between the two accounts gives some touch of pathos to the outlined story and reveals a world of suffering between the lines. One woman has described her confinement as " very bad," the hospital coldly writes in red ink, " slow and tedious, but perfectly normal." In another case the hospital remarks : " In labour 48 hours, but delivery normal," and one is not surprised to find that the poor woman describes it as " very bad." There were no particulars of confinement in 66 cases of women in industry, thus leaving 265 from

which estimates could be obtained. Of these only 28 are "bad or complicated." There were 470 cases only of women not in industry of whose confinements we had particulars, and of these 52 are "bad" or "complicated." Of the 26 industrially occupied women, 14 were employed in some kind of domestic work, office-cleaning, &c., and domestic service, 7 were occupied in the sewing trades, 1 a clerk, and 1 a book-folder (which gives 9 for sitting occupations); the others were respectively a labeller, a bottle-washer, a jam factory hand, and a theatre attendant. They had, in all but one case, followed the same or a kindred occupation before marriage. The former occupations of the women not industrially occupied are only given in 15 of the cases and the numbers are too small to be any guide in our search for enlightenment.

It is very unfortunate that we have not been able to get information on this point, for more than a very small proportion of these cases. One wants to know so very much more than the information given. It was realised, however, from the outset that the information on the case papers was collected for purposes quite other than that for which we required it, and it is a matter of no small wonder that they contain so much information as they do.

It is to be noted that the proportion of bad confinements among mothers *not* industrially occupied is slightly in advance of those who were industrially occupied during pregnancy. As this is a test of very vital importance, a careful revision of all the cases was made, but it failed to reveal any error.

It was thought that possibly these 55 mothers not in industry might have been subjected to more anxiety about husbands at the front than the others. The case papers were, then, re-examined with a view to determine this point, and reveal, in fact, that the home-keeping women had a percentage of 38.18 husbands in the army, while those industrially occupied had a percentage of 31.70. It is possible that this fact may in some measure account for the higher rate of bad confinements. We offer no comment on the subject; the results of the scrutiny are merely offered for consideration. There is one other point that may here be noted, viz.: that in the majority of cases it is the stronger woman who goes out to work, while the more delicate and weakly remains at home. This fact would probably have considerable bearing on the figures.

The small percentage of bad confinements in both classes is very marked. One of our investigators, a practising midwife, who has recently spent four months working in the West Riding of Yorkshire, was struck by the higher proportion of abnormal cases among her patients there than amongst those in the South London district where she usually practises.

She had no figures to give in support of the statement, but had evidently been very much struck by the difference during her short stay and suggested that it might be due to the constant sitting entailed on certain workers in the woollen mills. In view of this experience, it would be interesting if a similar investigation were

conducted in one of the North Country industrial centres and the figures compared with those obtained from the London hospitals.

General Features.

It was our intention when embarking upon this enquiry to see whether we could obtain from it any guide as to types of employment that showed a tendency to produce bad maternal results. For this purpose we divided the groups of occupations into "sitting," "standing," "heavy," and "active."

It soon became apparent that the "heavy" must be eliminated for lack of fuller information. It was only in those cases where harm was suspected that the fact of having had to lift heavy weights was alluded to. These few cases all happened to occur in breweries, but it would be obviously unfair to include all brewery work among the "heavy lifting." On the other hand, although not specifically mentioned, some of the many munition workers may have done heavy lifting, as also the workers in other factories. For this reason all work other than that known to involve continuous sitting or standing was included among the "active" group. We have grouped the 331 mothers who were industrially employed during pregnancy under these three industrial headings and taken the percentage of "bad" cases in each group. "Bad cases" are those where (*a*) 25 per cent or over of the children have died; (*b*) the mother had difficult or complicated confinements; and (*c*) infants were born not healthy.

Percentage of Bad Cases in Grouped Occupations.

	No.	per cent.
Total women employed during pregnancy in "active occupations"	213	100
Total bad cases among	83	39
Total women employed during pregnancy in "sitting" occupations	88	100
Total bad cases among	23	26.1
Total women employed during pregnancy in "standing" occupations	30	100
Total bad cases among	2	6

These results are obviously unsatisfactory. The high percentage of "bad" cases among the "active" group shows the need for much more accurate knowledge of the specific work than we were able to obtain. With regard to the "sitting" and "standing" occupations we are on rather firmer ground, although the figures are far too small to be convincing. The fact, however, that in this small number of cases, women employed while sitting have more than four times the number of bad cases of those employed while standing is surely an indication that standing continuously is less harmful to maternity than sitting continuously. On the other hand, sitting occupations

would naturally attract the more delicate type of woman, while only the strongest would attempt to continue in a standing occupation during pregnancy.

The women in "standing" occupations are barmaids, counter-hands, shop-assistants, lift attendants, and ironers in laundries. The "sitting" included all sewing trades, book-folders, clerks, and those branches of the tobacco trade which are done sitting at a bench, as well as one or two odd industries of a similar character.

Dr. Broussaire (Professor of Maternity in Paris) says that: "Standing immobile is invariably unfavourable to the pregnant woman; the woman who stands without moving soon becomes impotent"; and, further, "The attitude which corresponds best with the requirements of hygiene for the pregnant woman, is that of sitting, especially when interrupted by walking from time to time" (Dr. Broussaire, 'Address on the Work of Women in Munition Factories in Relation to Childbirth,' December, 1916).

The experts whom we consulted do not wholly agree with this opinion, in fact, almost all have agreed in being very emphatically of opinion that sitting continuously is one of the worst things a pregnant woman can do.

Several of the doctors pointed out that cases of difficult and complicated labour are more common among the leisured than the working classes *because* the women "sit about" and take care of themselves, instead of taking wholesome exercise. The exigencies of the tailoring or dressmaking workshop do not allow of the necessary "walking from time to time," hence, perhaps, the prominence of the sewing trades in our black list. There is one other point to be noted in this matter. These sitting occupations are all among the "skilled trades," those which a girl will enter at the age of 14 and follow, whenever she is industrially employed, for the rest of her life. The other occupations are chiefly "jobs" which require no special skill or training, and the workers in them change their occupation very frequently, taking anything that "comes along." It follows that the dressmakers, machinists, tailoresses, cigar-makers, and book-folders have practically been sitting still ever since they left school, and when one remembers the long hours of work permitted by the Factory Acts to girls of 14, this represents the greater part of their time during adolesence. Apart from this matter of the sitting occupations, then, we seem to have obtained no definite results from our enquiry, not even a clear lead to or from any type of industrial occupation. But this it has certainly revealed, that, judging by any or all of the tests to which we have put our 934 cases, there is practically nothing to choose in quality of maternity between those who "go out to work" and those who stay at home. Their children live or die in about equal numbers, their confinements are equally good or bad, their infants are born with an equal chance of survival. Any statement made to the contrary, therefore, must be backed by investigations and figures equally searching, if they are to gain any credence. This at least we claim to have proved, that we can find no case, on the

grounds of quality of maternity, for the prohibition of any woman to undertake any kind of healthy employment of which she feels herself capable.

If there seems to be some slight indication that the "sitting" occupations offer any modification of the statement, it is probably due to the fact that continuous sitting for hours on end is an unhealthy occupation, and by undermining and weakening the general health, impairs a woman's powers of bearing healthy children. And this is perhaps the crux of the whole matter. "Anything which is bad for general health is bad for motherhood," was the verdict of almost all our medical experts. Even sewing, that most feminine of all occupations, can become inimical to the function of child-bearing when carried on in ill-ventilated workshops for unreasonably long hours.

If the health of the future generations were given that place of first importance that it should have, we should secure to our mothers, both actual and potential, the healthiest, the best paid, the best conditioned, but not necessarily the lightest and easiest work, instead of leaving to them the badly paid and sweated industries as we do now.

Statements are made from time to time that certain kinds of employment are "not suitable for women" and "not women's work." There seems to be a prevailing idea in the public mind that there is a line of demarcation between "man's work" and "woman's work," as judged by physical standards. Investigation fails to reveal where that line is situated. It was (before the war) usually considered a man's job to walk in a stately and impressive manner about a shop and direct customers to the "ribbon department, madam." It was, and still is, considered a woman's job to scrub and clean elementary schools and the stone steps of blocks of offices. The line of demarcation between these two kinds of work (examples of many others), is obviously not based on physical grounds. The only right way in which judgment can be formed as to what is and what is not "suitable work for a woman" is by basing that judgment upon knowledge of what will and what will not affect her "quality of maternity." In our opinion that knowledge is yet to seek.

In this small enquiry we have failed to find any indication upon which even the wildest generalisation could be made. Much more searching, minute, and widespread investigations must be made before any opinion can be offered on the question.

Yet it is one of real and vital importance, and until it is answered in some form or other, disputes, blacklegging, and sex-controversy are likely to persist in the industrial world.

It is hoped that this will be one of the many subjects to be dealt with by a Ministry of Health. Surely none offers a more virgin field, or is more likely to be productive of useful results.

F. E. DAWSON.

REVIEWS.

A New Way of Housekeeping. By Clementina Black. (W. Collins 3*s.* 6*d.*)

Miss Clementina Black could not have chosen a more opportune moment for the publication of her book. For the first time it is now beginning to be generally realised that the enormous energy of women is a national asset, and the way in which that energy has hitherto been squandered, owing to our primitive methods of housekeeping, is beginning to dawn even upon men and the most domesticated old ladies.

No one who has not attempted to combine the duties of housewife and mother with the pursuit of some professional work can realise the strain under which the masses of our women have laboured. In the industrial classes a little light has been thrown on the subject since the Insurance Act came into force, revealing that the habitual illhealth of the wives and mothers was far above any actuarial estimate. This double life, as Miss Black so ably shows, is not in the least necessary, the business of supplying the physical needs of a single family ought not, in a modern community, to constitute the whole life work of one woman. That it has been considered all-absorbing is merely because housekeeping has been of all trades the last to organise, the last to train those engaged in it, and the last in which any attempt has been made to apply modern scientific methods.

Fortunately for women the hour has been hastened in which we realise that the nation cannot afford to waste the time even of women in unproductive labour. The sooner we make up our minds that the old haphazard methods of housekeeping and feeding cannot continue, the sooner we shall arrive at some scheme in which the whole process is arranged on a reasonable basis. One of the commonest and most futile suggestions we meet when we deplore the scarcity of good cooks, is that every woman should learn cooking! As if a man, finding his shoemaker unable to fit him comfortably, should insist on every man learning to make shoes. Rather let us seek experts, and sternly forbid any one except those qualified by taste and training to waste such precious materials as leather and food. Miss Black's delightful volume provides a carefully planned scheme of "federated households," in which she shows conclusively that twenty or thirty families living in close proximity could combine to run one house as a centre and provide expert cooking, marketing, and household service under skilled supervision, at no greater expense than that by which at present the same families provide each their own separate kitchen, cook, and other domestics, with all the waste of labour and material entailed. A centre for every street, providing every up-to-date appliance, doing all marketing on a wholesale scale, sending out cooked instead of raw, food, keeping the federated houses clean systematically, providing laundry, mending, and every other form of household labour required, would doubtless effect an enormous

saving, and would transform ur homes into places of rest and privacy, such as we hardly dare dream of in these days. There is no doubt that we are rapidly approaching the time when the present system will be quite unworkable, the shortage of domestic servants—which is a right and reasonable result of the discovery of the value of women in other industries, and which will not be appreciably altered after the war—will necessarily entail a reconstruction and simplification of home management. If Miss Black's scheme of federated homes could be carried out in every district it would be a solution of most of our difficulties.

Whether it will be possible to find in any district fifty or thirty families who are agreed on the subject is quite another question. Perhaps if they study Miss Black's practical book they may decide to try what would be a most interesting experiment.

ERNESTINE MILLS.

Industrial Fatigue. By Lord Henry Bentinck, M.P. (P. S. King, 1918, 6*d.*)

LORD HENRY BENTINCK'S pamphlet forms a valuable summary of existing knowledge on the subject of industrial fatigue, in popular style, and is very well suited for propaganda work. The public is still unfortunately strangely ignorant of the mass of evidence that has accummulated on the relation of hours to work and output, and the important lessons on the conduct and control of industry that are to be derived therefrom. It is hardly necessary to explain to readers of *The Women's Industrial News* that the amount of work done by an industrial worker does not vary directly with the number of hours worked. Many experiments made by employers in the last half century or so, and a few even much earlier, all tend to show that the output can often be increased by shortening the hours, and that the really important factor is the maintenance of the health, strength, and vigour of the operative. The great point to be discovered is, what are the hours of work in various kinds of industry which will evoke the best results, and to discover this it is necessary that experiments should be tried over a considerable time. A worker can make a great effort on occasion, and work for long hours without loss of efficiency, if the effort is not unduly prolonged. Long hours worked for weeks, months, or even years together inevitably lead to a loss of health and efficiency, and to a lowering, perhaps a complete stoppage, of output. The two points emphasised by Lord Henry are thus : (*a*) " the optimum," the best possible output that can be delivered in the day's work, to secure which not only hours but conditions of hygiene generally must be carefully considered ; and (*b*) the time factor, or the conditions which will enable a worker to maintain his output, maintain his efficiency, moral, mental, and physical, throughout his working life. These considerations have assumed during the war an importance never before given to them, the need of increased production having been urgent. Unfortunately the

matter was badly bungled in the first hurried months, previous experience was forgotten, and workers were stimulated and driven to work very long hours who would probably have done much better in shorter ones. And the public outside industry knows so little of the whole subject that it would be a real service to the country to spread this pamphlet broadcast in society, and thus help to promote a right judgment on a subject much more important to the conduct of the war than most people suppose.

Besides including a summary of previous study and experiments in industrial fatigue, the pamphlet contains a record of original instances obtained by careful first-hand enquiry. These are of especial interest. To quote one instance, in a shirt factory girls earning the disgracefully low average of 6*s*. 9*d*. a week for a 10-hour day were put on an 8-hour day, with the result that their output was doubled and the average raised to 14*s*. a week. B. L. H.

The Girl in Industry. By D. J. Collier. With Introduction and Foreword by B. L. Hutchins.

THIS little book appears at a very opportune moment. At a time when the country realises as never before the importance of those who are destined to inherit and to utilise the results of the present great national sacrifice, every contribution to our stock of knowledge of both the conditions and the needs of youth is valuable. Moreover, although the claims of youth have been receiving increasing recognition during the last fifty years, the adolescent boy and girl have not always received their fair share of attention. Classed sometimes as "children," and sometimes, only too truly, as "juvenile adults," their welfare has been mainly the concern of the social worker, with results excellent to the individuals reached, but haphazard in their incidence. Miss Hutchins and Miss Collier focus *our* attention on the girl in her teens in relation to her work and for this we owe them a great debt of gratitude.

More than a half of the girls in this country between 14 and 18 years of age are engaged in wage-earning occupations. Nearly one-third of these girls enter domestic service (these figures refer to pre-war days). Laundry work and the dress trades account for another 23.5 per cent, and the clerical, artistic, and other professions account for their quota, so that it comes almost as a shock to any one accustomed to watching the streams of girls who pour in and out of the factories to realise that these young people constitute the minority of working girls. This consideration is not a matter for unmixed congratulation, for such special protection as is given to youth in this country is concentrated almost entirely on this minority, their work is the subject of the present memorandum, and attention is drawn at the outset to the fact that we cannot at present guage the effects of factory work on young girls because data that would serve for a comparison between girls at secondary schools and girls at work, or between girls in an industrial and girls in a non-industrial

area, are at present wanting. It appears that such a comparison might most fruitfully be made in, for example, North-East Lancashire, "where the pupils of the secondary schools are drawn from the same class and from the same type of home as the majority of the operatives." Perhaps when the influence of Mr. Fisher has extended the promise of school medical inspection to include all boys and girls up to the age of 18, the necessary data will be forthcoming either to establish or to contradict opinion that is at present merely founded on surmise.

Taken as a whole, however, Miss Collier's investigations are distinctly reassuring. She has enquired into the health of girls in a great variety of trades and comes to the conclusion that "given suitable arrangements it need by no means be assumed that the factory is inherently injurious to women and girls," and, again given suitable conditions, it is evident that it may even be beneficial. In this connection friends of the so-called Welfare Movement will be glad to glean a number of instances of the beneficent effect of such supervision from the pages of 'The Girl in Industry.' Improved seating arrangements, lavatory accommodation, and provision of canteens, co-operation with foremen in an effort to suit the girl to the job or to avert possible injurious effects by a judicious alternation of employment, all seem to have played their part in improving the health of girls who have come under intelligent influence. Injurious effects from heavy work seem to be comparatively rare, and the cumulative results claimed on pp. 19 and 20 appear to be contradictary. Perhaps, in any further investigations, the authors would do well to take home conditions into account in endeavouring to estimate the effect of industrial life. For instance, it is by no means certain that the girls who start work at 8 A.M. are, as a general rule, any less breakfastless than those who start at 7! However, taking all favourable or qualifying circumstances into account, the general impression produced is that there is much over-fatigue and that legislative reform is needed to reduce the hours and spells of work of young people, and that conditions are so varied that a large number of girls run undue risk to their development through conditions of work that are in many ways remediable. The long dinner hour sounds an attractive suggestion, but one may perhaps remember that many Continental visitors of former years who enjoyed this prolonged form looked with envy on the English evening which was the result of greater concentration of work in business as well as in industry.

M. C. M.